इंटरनेट मानक

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"जानने का अधिकार, जीने का अधिकार"
Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

"पुराने को छोड नये के तरफ"
Jawaharlal Nehru
"Step Out From the Old to the New"

IS 12481 (1988): Hexagonal Insert Bits for Hexagon Socket Head Cap Screws and Hexagon Socket Set Screws for Power Tools [PGD 5: Assembly Hand Tools]

"ज्ञान से एक नये भारत का निर्माण"
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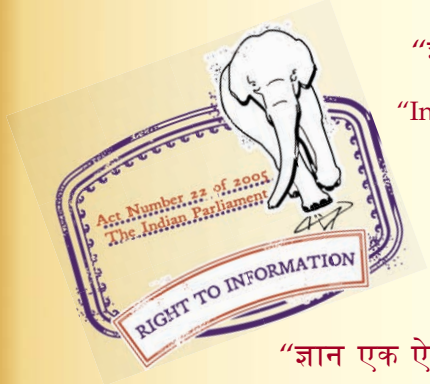
"Invent a New India Using Knowledge"



"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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Indian Standard (Reaffirmed 2003)

SPECIFICATION FOR HEXAGONAL INSERT BITS FOR HEXAGON SOCKET HEAD CAP SCREWS AND HEXAGON SOCKET SET SCREWS FOR POWER TOOLS

Hand Tools Sectional Committee, EDC 12; Metal Workers' Tools Subcommittee, EDC 12 : 2 [Ref : Doc : EDC 12 (4496)]

1. Scope — Covers the requirements for hexagonal insert bits suitable for fixing power driven tools, used for loosening/tightening of hexagon socket head cap screws conforming to IS : 2269-1981 'Specification for hexagon socket head cap screws (*second revision*)' and hexagon socket set screws conforming to IS : 6094-1981 'Specification for hexagon socket set screws (*first revision*)'.

2. Dimensions — Shall be as given in Table 1.

3. Material — Hexagonal insert bits shall be made from suitable materials meeting the requirements laid down in **4** and **7**.

Suitable Example:

Steel Designation T50Cr4V2 with sulphur and phosphorus contents of 0·05 percent each, as specified in IS : 3749-1978 'Specification for tool and die steels for cold work (*first revision*)' or steel designation 55C4 conforming to IS : 1570 (Part 2)-1979 'Schedules for wrought steels for general engineering purposes: Part 2 Carbon steels (unalloyed steels) (*first revision*)'.

4. Hardness — 490-660 *HV* (≃ 48 to 58 *HRC*).

5. Workmanship and Finish

5.1 Hexagonal insert bits shall be free from burrs, scales and cracks.

5.2 Hexagonal insert bits shall be given any suitable anti-corrosive coating. The type of anti-corrosive coating shall be as agreed to between the manufacturer and the purchaser.

6. Designation — Hexagonal insert bits shall be designated by its commonly used name, dimension of width across flat(s), form designation of hexagon driving end and number of this standard.

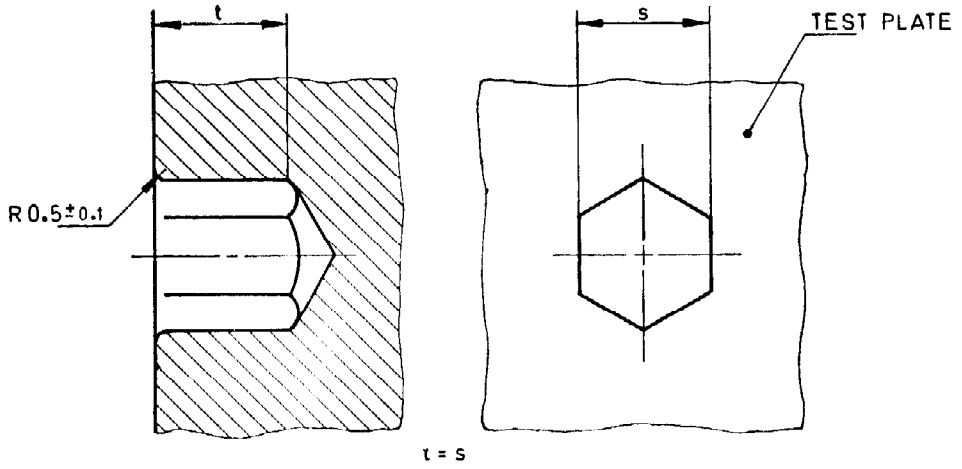
Example:

Hexagonal insert bit having width across flats 6 mm, with hexagonal driving end of form designation C8 shall be designated as:

Hexagonal Insert Bit 6-C8 IS : 12481

7. Torque Test

7.1 For the torque test, a torque testing fixture as shown below shall be used. The test plate shall have a minimum hardness 65 *HRC*. The tolerances for dimensions '*s*' shall be D10 whereas for dimension '*t*' of test plate, the tolerance shall be h13.

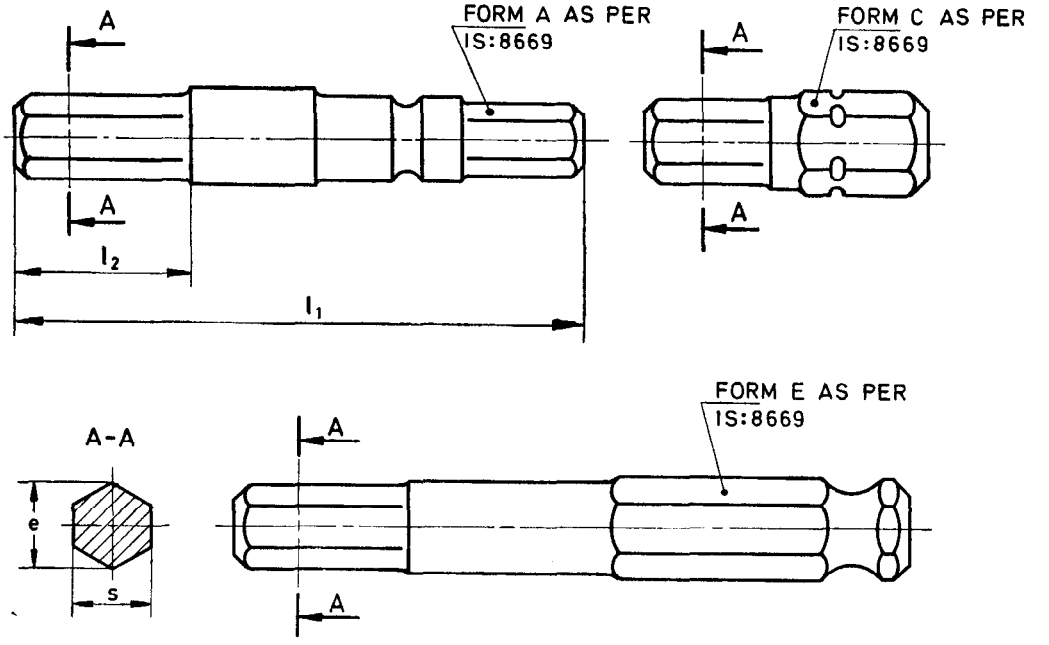


Adopted 1 September 1988 Gr 2

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

TABLE 1 DIMENSIONS AND TORQUE REQUIREMENTS FOR HEXAGONAL INSERT BITS FOR HEXAGON SOCKET SCREWS FOR POWER TOOLS

(*Clauses* 2 *and* 7.2)



Width A Across Flats *s*	Tolerence on *s*	l_1 For Male Hexagon Drive Ends as in IS : 8669							l_2 *Min*	*e*		Test Torque Nm *Min*
		A3	A5·5	C4	C6·3	C8	E6·3	E11·2		*Max*	*Min*	
1·5	h9	45	—	—	—	—	—	—	2·3	1·68	1·63	1·0
2·0		45	—	20	—	—	—	—	3·0	2·25	2·18	2·3
2·5		45	50	20	25	—	50	—	3·8	2·82	2·75	4·4
3		45	50	20	25	30	50	—	4·5	3·39	3·30	7·6
4	h10	—	50	—	25	30	50	—	6	4·53	4·44	18
5		—	50	—	25	30	50	55	7·5	5·67	5·58	35
6		—	50	—	25	30	50	55	9·0	6·81	6·71	61
8		—	—	—	—	30	—	55	12	9·09	8·97	140
10		—	—	—	—	30	—	55	16	11·37	11·23	280
12	h11	—	—	—	—	—	—	55	18	13·65	13·44	480

7.2 Hexagonal insert bit shall be loaded in the fixture described at **7.1** and the test force shall be applied gradually, without any jerk. Increase the test force up to the specified torque as given in Table 1.

The insert shall not show any permanent deformation or other damage, such as cracks or rupture which shall affect its function.

8. Sampling

8.1 *Lot* — All the hexagonal insert bits of same dimensions and manufactured from same material under similar conditions of production shall be grouped together to constitute a lot.

8.2 In order to ascertain the conformity of the lot, the procedure for sampling inspection as given in IS : 2500 (Part 1) - 1973 'Sampling inspection tables: Part 1 Inspection by attributes and by count of defects (*first revision*)', shall be followed. For various characteristics, the sampling procedure as given in **8.2.1** and **8.2.2** shall be followed.

8.2.1 For dimensions and workmanship and finish, the single sampling plan with Inspection Level IV and Acceptable Quality Level (AQL) 2·5 percent as given in Tables 1 and 2 of IS : 2500 (Part 1)-1973 shall be followed.

8.2.2 For hardness and torque tests, the single sampling plan with Inspection Level II and Acceptable Quality Level (AQL) 2·5 percent as given in Tables 1 and 2 of IS : 2500 (Part 1)-1973 shall be followed.

9. Marking — Each hexagonal insert bit shall be marked with the width across flats and manufacturer's name or registered trade-mark.

9.1 *Standard Marking* — Details available with the Bureau of Indian Standards.

EXPLANATORY NOTE

While preparing this specification, considerable assistance has been taken from DIN 7426-1982 'Hexagon inserts bits for hexagon socket screws' issued by the Deutsches Institut für Normung.

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